

REMARKS

By this Amendment, claims 1, 8-10, 17 and 18 are amended, claims 21 and 22 are canceled, without prejudice to or disclaimer of the subject matter thereof, and claims 23-24 are added. Claims 5, 6, 14 and 15 are withdrawn from consideration. Accordingly, claims 1-20, 23 and 24 are pending in this application. Reconsideration of the application is respectfully requested.

Support for the amendments may be found, for example, at least in paragraph [0038] and Fig. 3 of the application as originally filed. Thus, no new matter is added.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) satisfy a requirement of form asserted in the previous Office Action; (c) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (d) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

I. Information Disclosure Statement

An Information Disclosure Statement Form PTO-1449 was filed in the above-captioned patent application on July 16, 2004. Applicant has not yet received from the Examiner a copy of the Form PTO-1449 initialed to acknowledge the fact that the Examiner has considered the disclosed information. The Examiner is requested to initial and return to the undersigned a copy of the Form PTO-1449 in the next Office Action. For the convenience of the Examiner, copy of the form is attached.

II. Rejection Under 35 U.S.C. §112, First Paragraph

The Office Action rejects claims 21 and 22 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The rejection is moot in view of

canceled claims 21 and 22. Accordingly, withdrawal of the rejection is respectfully requested.

III. Rejections Under 35 U.S.C. §103(a)

The Office Action rejects claims 1, 2, 10, 11, 17, 19 and 20 under 35 U.S.C. §103(a) over U.S. Patent Application Publication No. 2002/0101396 to Huston et al. (hereinafter "Huston") in view of U.S. Patent No. 5,808,594 to Tsuboyama et al. (hereafter "Tsuboyama"); rejects claims 3, 4, 12 and 13 under 35 U.S.C. §103(a) over Huston in view of Tsuboyama, and further in view of U.S. Patent No. 5,357,583 to Sato et al. (hereinafter "Sato"); rejects claims 7 and 16 under 35 U.S.C. §103(a) over Huston in view of Tsuboyama, and further in view of U.S. Patent No. 6,697,037 to Alt et al. (hereinafter "Alt"). Applicants respectfully traverse the rejections.

Huston does not teach or suggest a display device, driving method and electro-optical device including "each of said sub-pixels including a static random access memory and a switching transistor" and "a data signal being supplied to the static random access memory through the switching transistor," as recited in independent claim 1, and similarly recited in independent claims 8-10, 17 and 18.

The Office Action asserts that Huston teaches a display device, an electro-optical device and a driving method including a plurality of pixels each having a plurality of sub-pixels in which each sub-pixel is provided with a static random access memory. Notwithstanding these assertions, Huston does not teach or suggest each sub-pixel including a static random access memory and a switching transistor in which a data signal is supplied to the static random access memory through the switching transistor, as set forth in independent claims 1, 8-10, 17 and 18.

The display device, driving method and electro-optical device respectively of claims 1, 8-10, 17 and 18 include the plurality of sub-pixels each including at least one static

random access memory and a switching transistor. For example, in Fig. 3, each sub-pixel includes static random access memory 41, 42, a transistor 3, 31, 32 and an organic EL element 61, 62 disposed between the switching transistor 3, 31, 32 and the static random access memory 41, 42. Each static random access memory 4, 41, 42 includes a transistor type in addition and similar to the switching transistors 3, 31, 32. See at least paragraph [0041]. Although the static random access memory 41, 42 may be directly connected to a scanning line and a data line, the static access memories 41, 42 may also be disposed such that they are connected to a signal line 2 via the transistors 3 whose gates are connected to the scanning line 1. See at least [0045]. As a result, it is not necessary to provide a number of scanning lines according to a number of sub-pixels. See at least paragraph [0045]. Accordingly, an undesirable writing capacitance generated between writing patterns may be reduced, thereby preventing a delay caused when data is rewritten. Further, light emission efficiency may be enhanced with a smaller number of transistors and wiring patterns. See at least paragraph [0045]. Neither Huston, Tsuboyama, Sato nor Alt, provides such advantages.

Huston teaches a display matrix 12 including a plurality of display elements 14. See Fig. 1. Each display element 14 includes a pixel 16 and a display circuit 18 having a plurality of memory cells 20A, 20B or more than one memory cell per pixel. See page 5, paragraphs [0082] and [0084], and page 6, paragraph [0087]. Further, Huston teaches that each static random access memory (SRAM) cell is composed of six transistors to activate each pixel. See paragraphs [0015] and [0097]. However, Huston does not teach a separate transistor in addition to the transistors of the SRAM cell provided for each pixel. Therefore, Huston cannot reasonably be considered to teach or suggest a data signal being supplied to the SRAM through a switching transistor other than the transistors forming the SRAM. Since Houston does not teach or suggest each of the sub-pixels including a static random access memory and a switching transistor where a data signal is supplied to the static random access memory

through the switching transistor, Huston does not teach or suggest the display device, driving method and electro-optical device respectively of claims 1, 8-10, 17 and 18.

The Office Action asserts that Tsuboyama teaches a size, or area, of each of at least two sub-pixels, in each pixel, being differentiated from each other. See Figs. 1B, 1C, 8A and 8C. Notwithstanding these assertions, Tsuboyama does not remedy the deficiencies of Huston.

Tsuboyama teaches a driving method and a display apparatus including at least two types of pixels having mutually different areas inclusive of larger pixels and smaller pixels. See Fig. 4, and the Abstract. However, Tsuboyama does not teach or suggest either the larger pixels or the smaller pixels each including a static random access memory and a switching transistor. Therefore, Tsuboyama cannot reasonably be considered to teach or suggest a data signal being supplied to a static random access memory through a switching transistor.

Because Tsuboyama does not teach or suggest sub-pixels including a static random access memory and a switching transistor to supply data signal, Huston and Tsuboyama do not teach or suggest the display device, the driving method or the electro-optical device of claims 1, 8-10, 17 and 18.

The Office Action asserts that Sato teaches a grayscale level being set by a function of specified ratios (see col. 5, lines 55-59). Notwithstanding these assertions, Sato does not remedy the deficiencies of Huston and Tsuboyama.

Sato teaches a graphics processing apparatus and method including a color laser printer 500. See Fig. 2. The color laser printer 500 includes a driver including a laser diode on/off circuit 550 and a constant current generator 552. See Fig. 11 and col. 11, lines 42-44. Although the constant current generator 552 includes a transistor 560, Sato does not teach or suggest each sub-pixel including a static random access memory and the transistor 560.

Therefore, Sato cannot teach or suggest that a data signal is supplied to a static random access memory through the transistor 560.

Because Sato does not teach or suggest each sub-pixel including a static random access memory and a switching transistor to supply data signal to supply a data signal to the static access memory through the switching transistor, the asserted combination of Huston, Tsuboyama and Sato, does not teach or suggests the display device, driving method or electro-optically device of claims 1, 8-10, 17 and 18.

The Office Action asserts that Alt teaches an electro-optical elements including sub-pixels SRAM memories for electro-luminescent arrays. See col. 6, lines 37-48 and col. 9, lines 1-5. Notwithstanding these assertions, Alt does not remedy the deficiencies of Huston, Tsuboyama and Sato.

Alt teaches a TFT LCD active data line repair system and method including an array portion 20 with pixels and/or sub-pixels. See Fig. 1. Alt also teaches that it is well known in the art that thin film transistors are located adjacent to each of the cross over points of every data line 22 and gate line 26 to drive the pixel or sub-pixel of the array 20. See col. 1, lines 44-47. However, Alt does not teach or suggest each of the sub-pixels including a static random access memory in combination with a thin film transistor. Therefore, Alt cannot reasonably be considered to teach or suggest a data signal being supplied to a static random access memory through a thin film transistor.

Because Alt does not teach or suggest each sub-pixel including a static random access memory and a switching transistor to supply a data signal to a static random access memory through the switching transistor, the asserted combination of Huston, Tsuboyama, Sato and Alt does not teach or suggest the display device, the driving method or the electro-optical device of claims 1, 8-10, 17 and 18.

Therefore, claims 1, 8-10, 17 and 18 are not rendered obvious by Huston, Tsuboyama, Sato and Alt, alone or in combination. Claims 2-7, 11-16 and 19-20 variously depend from claims 1 and 10, and thus are also not rendered obvious by Huston, Tsuboyama, Sato and Alt for at least the reasons discussed above, as well as for the additional features they recite. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

Claims 23 and 24 also variously depend from claims 1 and 10, and thus also would not have been rendered obvious over Huston, Tsuboyama, Sato and Alt for at least the reasons set forth above, as well as for the additional features they recite.

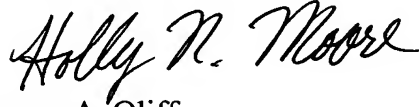
IV. Conclusion

Claims 5, 6, 14 and 15 variously depend from claims 1 and 10. Thus, it is respectfully requested that claims 5, 6, 14 and 15 be rejoined upon allowance of claims 1 and 10.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-20, 23 and 24.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned representative at the telephone number set forth below.

Respectfully submitted,



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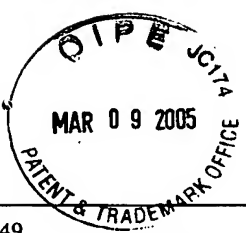
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Attachments:
Form PTO-1449 (filed July 16, 2004)

Date: March 9, 2005

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Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE		ATTY DOCKET NO. 111629	APPLICATION NO. 10/036,396	
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)				APPLICANT(S) Mutsumi KIMURA		
				FILING DATE January 7, 2002	GROUP 2673	
U.S. PATENT DOCUMENTS						
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
	1	5,539,546	07/23/1996	Koden et al.		
FOREIGN PATENT DOCUMENTS						
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)						
EXAMINER				DATE CONSIDERED		
Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.						